UNITED STATES PATENT AND TRADEMARK OFFICE

UNITED STATES DEPARTMENT OF COMMERCE
United States Patent and Trademark Office
Address: COMMISSIONER FOR PATENTS
P.O. Box 1450
Alexandria, Virginia 22313-1450
www.uspto.gov

APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/616,307	07/10/2003	Yoav Kimchy	25855	4836

67801 7590 01/07/2009

MARTIN D. MOYNIHAN d/b/a PRTSI, INC.
P.O. BOX 16446
ARLINGTON, VA 22215

EXAMINER
MEHTA, PARIKHA SOLANKI

ART UNIT	PAPER NUMBER
3737	

MAIL DATE	DELIVERY MODE
01/07/2009	PAPER

Please find below and/or attached an Office communication concerning this application or proceeding.

The time period for reply, if any, is set in the attached communication.

Office Action Summary	Application No.	Applicant(s)	
	10/616,307	KIMCHY ET AL.	
	Examiner	Art Unit	
	PARIKHA S. MEHTA	3737	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE *3* MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

1)☒ Responsive to communication(s) filed on *12 March 2008*.

2a)☐ This action is **FINAL**. 2b)☒ This action is non-final.

3)☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

4)☒ Claim(s) *1-109 and 113-158* is/are pending in the application.

4a) Of the above claim(s) _____ is/are withdrawn from consideration.

5)☐ Claim(s) _____ is/are allowed.

6)☒ Claim(s) *1-109 and 113-158* is/are rejected.

7)☐ Claim(s) _____ is/are objected to.

8)☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

9)☐ The specification is objected to by the Examiner.

10)☒ The drawing(s) filed on *10 July 2003* is/are: a)☒ accepted or b)☐ objected to by the Examiner.

Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).

Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).

11)☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

12)☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).

a)☐ All b)☐ Some * c)☐ None of:

1.☐ Certified copies of the priority documents have been received.

2.☐ Certified copies of the priority documents have been received in Application No. _____.

3.☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

1) ☒ Notice of References Cited (PTO-892)
2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
3) ☒ Information Disclosure Statement(s) (PTO/SB/08) Paper No(s)/Mail Date *See Continuation Sheet*.
4) ☐ Interview Summary (PTO-413) Paper No(s)/Mail Date. _____ .
5) ☐ Notice of Informal Patent Application
6) ☐ Other: _____.

DETAILED ACTION

Claim Objections

1. Claims 1-109 and 113-158 are objected to because of the following informalities:

Claims 1 and 123 recite “in communicating” where “in communication” should be used.

Claims 1 and 123 recite systems for “calculating an image”. It is unclear how the system is configured to "calculate" an image. Furthermore, the function of "calculating an image" conflicts with the remainder of the claims.

In claims 1, 7, 24, 30, 42, 71, 72, 77, 83, 89, 123 and 132, the recitation "designed and" should be removed.

Claims 2-6, 19, 22 and 39 fail to further limit the structure of the claimed invention.

Claim 6 recites “the image acquisition” without proper antecedent basis.

In claims 8-10, 13, 133-135 and 138, the recitation "constructed as" should be removed.

In claim 20, it is unclear what element is being set forth by "a visual co-presentation".

In claims 21, 34, 35, 40, 81, 124, 129-131, 148, 152 and 154, the recitation "adapted" should be replaced with "configured".

Claim 50 recites “the first image acquisition” without proper antecedent basis.

Claims 51-60, 66, 70, 73, 74, 76, 78-81, 84-86, 88, 93-102 and113-122 fail to further limit the claimed method; these claims set forth nothing more than structural limitations which do not affect the steps recited therein.

In claim 144, “a first and a second” should be replaced with “first and second”.

Appropriate correction is required.

Claim Rejections - 35 USC § 112

2. The following is a quotation of the first paragraph of 35 U.S.C. 112:

> The specification shall contain a written description of the invention, and of the manner and process of making and using it, in such full, clear, concise, and exact terms as to enable any person skilled in the art to which it pertains, or with which it is most nearly connected, to make and use the same and shall set forth the best mode contemplated by the inventor of carrying out his invention.

3. Claim 143 is rejected under 35 U.S.C. 112, first paragraph, because the scope of the claimed invention is unclear and as such a skilled artisan would not be reasonably enabled, by the claim and/or specification, to make and use the invention recited therein. Claim 143 fails to set forth any structure and recites nothing more than limitations placed upon the intended use of the invention.

Claim Rejections - 35 USC § 102

4. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

> A person shall be entitled to a patent unless –
>
> (b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

5. Claim is 143 rejected under 35 U.S.C. 102(b) as being anticipated by Takayama (US Patent No. 5,088,492), hereinafter Takayama ('492). Takayama ('492) teaches a radioactive emission probe capable of insertion via a trocar valve (Abstract lines 1-2).

Claim Rejections - 35 USC § 103

6. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

> (a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negatived by the manner in which the invention was made.

7. This application currently names joint inventors. In considering patentability of the claims under 35 U.S.C. 103(a), the examiner presumes that the subject matter of the various claims was commonly owned at the time any inventions covered therein were made absent any evidence to the contrary. Applicant is advised of the obligation under 37 CFR 1.56 to point out the inventor and invention dates of each claim that was not commonly owned at the time a later invention was made in order for the examiner to consider the applicability of 35 U.S.C. 103(c) and potential 35 U.S.C. 102(e), (f) or (g) prior art under 35 U.S.C. 103(a).

8. Claims 1-6, 8-39, 41-91, 93-109 and 113-142 and 148-158 are rejected under 35 U.S.C. 103(a) as being unpatentable over Krakovitz (US Patent No. 6,212,423), hereinafter Krakovitz ('423) in view of Daighighian (US Patent No. 6,510,336), hereinafter Daghighian ('336).

Krakovitz ('423) teaches a method and endoscopic system for simultaneous ultrasound imaging and radioactive emission detection, the system including a multiple collimators and a detector 721 (col. 5

lines 54-64). Krakovitz (‘423) teaches a data processor configured to integrate the image and emission detection information in a three-dimensional image (col. 6 lines 11-25 and 62-67).

Krakovitz (‘423) does not teach a position tracking system and method for the emission/imaging probe. In the same field of endeavor, Daghighian (‘336) teaches a position tracking system and method for radioactive emission detecting probes, including means and steps for generating images of the area in which the distal tip of the probe is located within the patient’s body (Abstract, col. 7 line 59 – col. 8 line 6). It would have been obvious to one of ordinary skill in the art to have modified Krakovitz (‘423) to include the position tracking means and steps of Daghighian (‘336), in order to allow for mapping and visualization of the probe position during the procedure.

9. Claims 7, 40 and 92 are rejected under 35 U.S.C. 103(a) as being unpatentable over Krakovitz (‘423) nor Daghighian (‘336) as applied to claims 1, 36 and 90 above, and further in view of Tournier (US Patent No. 6,680,750), hereinafter Tournier (‘750). Krakovitz (‘423) and Daghighian (‘336) lack means and steps for applying collimation-deconvolution algorithms. In the same field of endeavor, Tournier ('750) teaches a collimation deconvolution algorithm, and further teaches that it is useful for improving count rate (col. 3 lines 26-33). It would have been obvious to one of ordinary skill in the art to have modified Krakovitz (‘423) and Daghighian ('336) to further include the collimation deconvolution algorithm of Tournier ('750), in view of the teachings of Tournier ('750).

10. Claims 144-147 are rejected under 35 U.S.C. 103(a) as being unpatentable over Krakovitz (‘423) in view of Daghighian (‘336) and Tournier (‘750).

Krakovitz (‘423) and Daghighian (‘336) substantially teach all features of the present invention as previously discussed for claim 90. Krakovitz (‘423) and Daghighian (‘336) lack steps for obtaining count rates for first and second photon energies. In the same field of endeavor, Tournier ('750) teaches a method of obtaining photon energy count rates via deconvolution methods in radiation emission detection (col. 4 lines 44-68), and further teaches that such method is advantageous for enabling a higher count rate than traditional cameras (col. 4 lines 31-34). It would have been obvious to one of ordinary skill in the art to have modified Krakovitz (‘423) and Daghighian (‘336) to include the count rate obtaining steps of Tournier (’750) and thereby achieve the claimed invention, in view of the teachings of Tournier (‘750).

Double Patenting

11. The nonstatutory double patenting rejection is based on a judicially created doctrine grounded in public policy (a policy reflected in the statute) so as to prevent the unjustified or improper timewise extension of the "right to exclude" granted by a patent and to prevent possible harassment by multiple assignees. A nonstatutory obviousness-type double patenting rejection is appropriate where the conflicting claims are not identical, but at least one examined application claim is not patentably distinct from the reference claim(s) because the examined application claim is either anticipated by, or would have been obvious over, the reference claim(s). See, e.g., *In re Berg*, 140 F.3d 1428, 46 USPQ2d 1226 (Fed. Cir. 1998); *In re Goodman*, 11 F.3d 1046, 29 USPQ2d 2010 (Fed. Cir. 1993); *In re Longi*, 759 F.2d 887, 225 USPQ 645 (Fed. Cir. 1985); *In re Van Ornum*, 686 F.2d 937, 214 USPQ 761 (CCPA 1982); *In re Vogel*, 422 F.2d 438, 164 USPQ 619 (CCPA 1970); and *In re Thorington*, 418 F.2d 528, 163 USPQ 644 (CCPA 1969).

A timely filed terminal disclaimer in compliance with 37 CFR 1.321(c) or 1.321(d) may be used to overcome an actual or provisional rejection based on a nonstatutory double patenting ground provided the conflicting application or patent either is shown to be commonly owned with this application, or claims an invention made as a result of activities undertaken within the scope of a joint research agreement.

Effective January 1, 1994, a registered attorney or agent of record may sign a terminal disclaimer. A terminal disclaimer signed by the assignee must fully comply with 37 CFR 3.73(b).

12. Claims 1-109 and 113-158 are provisionally rejected on the ground of nonstatutory obviousness-type double patenting as being unpatentable over claims 85-106 of copending Application No. 09/641,973. Although the conflicting claims are not identical, they are not patentably distinct from each other because they merely claim obvious groupings and variations of the same steps and elements.

This is a provisional obviousness-type double patenting rejection because the conflicting claims have not in fact been patented.

13. Claims 1-109 and 113-158 are provisionally rejected on the ground of nonstatutory obviousness-type double patenting as being unpatentable over claims 1-8, 17, 23, 26-28, 34, 37-40, 46, 49, 62, 63, 72, 77, 122 and 133-148 of copending Application No. 09/727,464. Although the conflicting claims are not identical, they are not patentably distinct from each other because they merely claim obvious groupings and variations of the same steps and elements.

This is a provisional obviousness-type double patenting rejection because the conflicting claims have not in fact been patented.

14. Claims 1-109 and 113-158 are provisionally rejected on the ground of nonstatutory obviousness-type double patenting as being unpatentable over claims 1-311 of copending Application No. 10/343,792. Although the conflicting claims are not identical, they are not patentably distinct from each other because they merely claim obvious groupings and variations of the same steps and elements.

This is a provisional obviousness-type double patenting rejection because the conflicting claims have not in fact been patented.

15. Claims 1-109 and 113-158 are provisionally rejected on the ground of nonstatutory obviousness-type double patenting as being unpatentable over claims 1-82 of copending Application No. 10/836,223. Although the conflicting claims are not identical, they are not patentably distinct from each other because they merely claim obvious groupings and variations of the same steps and elements.

This is a provisional obviousness-type double patenting rejection because the conflicting claims have not in fact been patented.

Conclusion

Any inquiry concerning this communication or earlier communications from the examiner should be directed to PARIKHA S. MEHTA whose telephone number is (571)272-3248. The examiner can normally be reached on M-F, 8 - 4:30pm.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Brian Casler can be reached on 571.272.4956. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see http://pair-direct.uspto.gov. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

/Ruth S. Smith/
Primary Examiner, Art Unit 3737

/Parikha S Mehta/
Examiner, Art Unit 3737